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Thesis

THE FINANCIAL ANALYSIS OF INDUSTRIAL SECURITIES

by

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Introduction:

Financial analysis of Industrial Securities suggests a rather broad and general coverage to an individual, and it is true that the term "industrial" covers every type of corporate enterprise save the railroads and public utilities.

To the average man "industrials" means any and every type of a manufacturing concern, but an analyst has a breakdown of industrials into three distinct classes:

1. The extractive industries such as mining and fishing.
2. The productive or manufacturing industries which include such types of manufacturing as the manufacture of automobiles, refrigerators, radios, etc.
3. The distributive or merchandising industries which consist of the wholesalers, retailers and mail order Companies.

These industries although diverse in character have one thing in common from the viewpoint of the investor. They all require capital so that the industry can function. Capital (and I speak of financial capital) is derived from savings either by an individual or by a corporation. We shall disregard the savings of the corporation and direct our thoughts to the savings of the individual.

It is because of the capital of the individual that American business has attained the stature that it enjoys today. And it is upon the shoulders of the individual investor that the system of free enterprise rests now and in the future.

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It is to this individual, with accumulated savings, the prospective investor, that this thesis devotes its attention to.

The prospective investor must realize that in entrusting his capital (either as a creditor or stockholder) to any industry, he has to assume some degree of risk. He must calculate according to his means just what degree of risk he can bear. After determining this he must proceed with analysis to find out the most suitable way to invest his money. No wise investor should ever invest his capital without a careful appraisal of the security issue itself, the industry it represents and the company which issues the security.

The question is now raised: how can I know which Companies are sound or what securities to buy. It is in answer to this problem of the investor that this thesis is written with the fervent hope that it will partially solve the difficulty, and shed more light on the subject of security analysis.

Chapter I - Classes of Industrial Securities

Securities may be divided into broadly two classes; those that represent a) owners - evidenced by the holding of stock; and b) creditors - evidenced by the holding of bonds or notes. We shall discuss these in the order of their claim against the Company.

Bonds:

Bonds are of such a nature that they represent debt of a Company, and they require interest payments at definite time periods and repayment of principal at maturity. Holders of bonds have prior claims over preferred and common stockholders against the company.

Kinds of Bonds:

Bonds can be divided into roughly two classes: a) secured bonds; and b) unsecured bonds. Secured bondholders have a claim against assets, and earnings of a company whereas unsecured bondholders have claims against earnings of a company only. Examples of secured bonds are mortgage bonds, first or second, and collateral trust bonds. Unsecured bonds are represented by debentures and notes.

It is interesting to note the difference between the two incase the company can not pay the interest or principal on its bonds. The secured bondholders in this instance can foreclose on property or security pledged in the bond issue. The unsecured bondholder, who only has a claim against earnings has no recourse, but to ask the courts to place the Company in receivership. This is a long drawn out and usually expensive

process, so in order to avoid this there will generally be some concessions on the part of the company, and the bondholder to amicably settle the debt.

In comparison with the Railroads, it is noteworthy that the forms of industrial bonds are rather simple and few. Railroads as a general rule have a great number of bond issues, various and diverse whereas the industrials very seldom have many different types of bond issues.

Preferred Stock:

Preferred stock is junior in claim to bonds, but senior to common stock. It represents a claim against assets, and earnings of a Company. There are many types of preferred among which are: a) preferred as to assets: b) preferred as to dividends: c) cumulative or non-cumulative: d) redeemable or non-redeemable and e) participating or non-participating.

Common Stock:

Common stock represents to the holder a more or less residual interest in the company. In other words in case of liquidation of a going concern the common stockholders would share in the balance of assets and earnings left after the prior claims of bond holders and preferred stockholders.

Reasons for the issue of Securities:

Companies issue securities mainly to obtain capital, but there are cases where they are issued to replace other outstanding securities. (This will be discussed below).

New Companies:

The first and foremost reason for the issuance of securities

is to enable a new company to obtain funds. A Company when it is incorporated under the laws of any State, is authorized to issue a specific number of shares of capital stock. Usually the State law specifies the minimum amount of paid in capital with which a corporation shall begin business, but no maximum amount is specified, other than the limited number of shares authorized.

Expansion:

Companies also issue securities to obtain funds for expansion. Usually in prosperity when a company is doing well they may wish to enlarge their facilities and expand their markets. This requires an outlay of money. Either the company can expand out of earnings or they usually issue securities to raise the necessary funds.

Working Capital Position:

Companies may issue securities to obtain funds to strengthen their working capital position. A strong working capital position is a distinct asset to a company from the point of view of the investor, because it enables the company to meet obligations if the occasion demands, and yet have some left over to perhaps increase volume.

Refunding:

Companies may have a bond issue maturing in the very near future and not have the necessary cash to pay off the principal. Under these conditions if the maturity date cannot be extended, a Company may issue a security to obtain funds to pay off the principal. If the security issued is a bond to replace an existing bond issue then the process is termed refunding. This is

essentially a means of replacing existing capital, and does not add to the capital supply.

Refunding is often carried out before a bond issue has matured. This is done especially when conditions in the market are favorable and a reduction in fixed interest costs can be attained thereby. This process depends, however, on the nature of the bonds, whether they be callable or non-callable. If they are callable, there is not too much difficulty, as the company, after weighing all the factors, can exercise its option. If they are non-callable, the bond holder would be definitely foolish if he surrendered a 5% issue in times of low money rates in favor of a 4% issue, without receiving a substantial cash bonus.

Refinancing:

Refinancing is a process whereby common stock is substituted for a bond issue, or bonds are substituted for preferred stock. Refinancing by means of selling common stock to replace a bond issue enables the company to reduce its bonded indebtedness and fixed charges, and simplifies its capital structure. If the common replaces all of the bonded indebtedness then if it should come to a period of difficulty (such as the depression of the 30's) credit would be readily available. If there is a lesson that can be drawn from this depression of the 30's, it is that too many companies were overburdened with fixed charges, and as a result there were extensive reorganizations.

When a company substitutes bonds for preferred stock, they do it because the interest charge on the bonds will be less than the dividend on the preferred stock, or else because there will

be a tax reduction as a result. This will be discussed further below, but suffice to say now that interest on bonds is deductible before provision of Federal Income Tax.

Funding:

Funding is a process whereby a short term liability is converted to long term debt by means of a bond issue. There are many conflicting ideas concerning this procedure. Here you are substituting a long term debt with a higher interest rate for the short term liability. You are thereby increasing your interest costs, and thus many argue that it is an uneconomical process. However, others grant this, but say that perhaps the transfer of the maturity date from the immediate to the far future might enable the company to carry on in face of adverse business conditions.

Summary:

In summation, we might say that common stock, preferred stock and bonds are issued by the various companies under the following conditions:

I - Common stock:
  a) Funds for new company
  b) Funds for expansion
  c) Funds to strengthen working capital position
  d) Funds for refinancing
  e) As a bonus in mergers

II - Preferred stock:
  a) Used for new capital
  b) Used quite often in reorganizations
  c) Sometimes used as a bonus in mergers

III - Bonds:
  a) Used to obtain long term funds to supplement the capital provided by stockholders.
  b) Used in funding and refunding operations.
  c) Used in refinancing operations.

Preferability of Securities: Investors's viewpoint.

As mentioned above, before making any analysis whatsoever, the investor must calculate the degree of risk that he can bear. He must realize that a low degree of risk will not give him a high yield. Conversely too, a high degree of risk will not give him a low yield. The two concepts are diametrically opposed. The yield varies proportionately with the degree of risk. He must realize too that there are no investments that are free from risk entirely.

Bonds are purchased as a traditionally conservative investment, with a low return, but a definite and an assured one. Bonds, as a rule, are not bought for capital appreciation - the outstanding exception being the purchase of bonds in default with the hopes that they will appreciate in value under a new financial plan.

Preferred stocks, if bought at par or around par, are purchased for investment purposes, but it is this writer's viewpoint that the intermediate position of the preferred stockholder is not a very suitable one. This is so because he has neither the security of the creditor, nor the chance for as great a capital appreciation as the common stockholder. Also, depending on the type of preferred that he has, his earnings may not be definite. Therefore, he has the risks of the stockholder without the advantages.

Common stocks are purchased with one of the following reasons in mind:

1) For safety of capital
2) For investment purposes - income
3) For capital appreciation
4) As a hedge against inflation

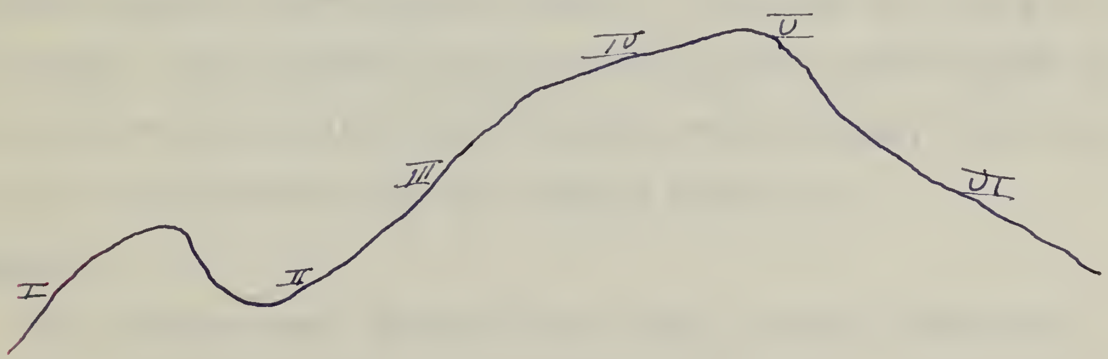
Chapter II - The Industry

It is necessary when an investor decides to invest his capital, that he choose the industry first, and the Company with the industry second. This is so because a strong Company may not be able to rise up and overcome the handicaps of a declining industry, whereas a weak Company may do very well in a growing industry. It must be remembered that a Company's position is bound up with that of the whole industry and is affected by the various stages of the industry life cycle.

Life Cycle of Industry:

We might compare the life cycle of an industry to the life clycle of a person. The period of birth, the young experimental years, the formative years, the successful years, the mature years and finally the senile years.

Graphically the life cycle might be represented thus in stages:



Stage #1

This is a period of initial prosperity. A new idea is capitalized upon, and there is a period of five or six years when the young business is flourishing.

From the standpoint of the purchaser of securities, it is almost impossible to pick the successful companies in this stage. For this reason the risk is very high, and the return is very high accordingly, if successful.

Stage #2

This is the readjustment or shakedown period. Herein is where the new business is really tested - the deadwood is eliminated. In this four year period, a lot of Businesses are eliminated. Take for example, the years 1909 - 1915: 99% of the automobile Companies failed.

At the end of stage two seems to be the ideal time for the securities purchaser. The weaker members have been forced out, of the industry, and the leaders are usually financially strong. They are usually sufficiently ahead of the pack so that you can pick them. The investor, however, must have a firm belief that the industry has a vital and vigorous growth ahead, before he selects the securities of the leading Companies.

Stage #3

The readjustment period is now over and the successful Companies start to climb due to a strong demand. Demand for the product is so strong that the Companies in the industry might go ahead with a declining business cycle.

In this stage the purchaser can pick with confidence almost regardless of the business cycle. However, as business becomes more mature, the position of the business cycle becomes progressively more important in the timing of a security purchase.

Stage #4

The industry for the first time feels the tide - like pull of depression - the total volume may not fall off, but the curve tends to flatten out.

In stage four, the price-earnings ratio tends to be too high, having been bid up by purchasers who have come in late.

Stage #5

The industry has now passed full maturity and is on the decline. This is where other new competitive products rise up and take over leadership.

This stage does not necessarily mean a decline in earning power, but it does mean that there will be no substantial increase in earnings.

Stage #6

This is a stage of complete saturation, and there is no hope for the industry left. The Companies might continue operating, if they can cover their fixed charges.

Future Profitability:

Since an investor is making a purchase today for the rights to share in future income, he should look to the future in his analysis of the industry. He should be attracted to industries that have a growth factor and hold promise of increased earning power. I do not believe that he should invest in a declining in-

dustry, where he faces the outlook of decreased earning power. This then is one of the prime purposes of industry analysis, to determine the future profitability in the industry.

This future profitability conclusion is arrived at after a careful appraisal of the many factors that could affect it. An examination should be made of: a) economic importance, b) patents, c) type of product, d)research, e) raw materials, and f) tariff position.

Economic Importance:

The analyst in seeking the answer to the economic importance of the industry must ask the following questions: How many people employed? A fly-by-night or well established industry? What is the value of its products? Is the importance of the industry growing or declining? The answers to these questions gives the analyst some idea of the economic importance of the industry.

The investor should realize that industries that have been established, and have attained prominence, have behind them a record of solidarity that the investor can use as a guide. As an example of these, we could cite the automobile industry, the steel industry and the meat packing industry.

Patents:

The possession of patents may influence the degree of business risk in the industry. The value of a patent is that it limits competition. If a Company, which depends on a patent for its lifeblood, should suddenly have the patent invalidated, it would have a meaning of the utmost importance to the investor.

Certain chemical and drug Companies, and Eastman Kodak are almost wholly dependent on patents for leadership in their fields.

Industrial Research:

In order to constantly strive for better quality, lower prices and larger sales, an industry must engage in research. Industrial research can be in the field of: 1) improved methods of production, 2) development of new products, and 3) finding new uses or outlets for its present products.

The customer is forever looking for better quality and lower prices. This is only accomplished by research and the industry that does this is the one that is going to increase the sales in its Companies, and thereby increase the economic importance of the industry. For example; the American Meat Institute is the trade research and educational associations of the American Meat Packing Industry.

Type of Product:

Another factor to examine in the analysis of the industry is the type of good that the industry is engaged in producing. The type of product can be broken down into three groups: a) luxury or necessity, b) consumer or producer goods, e) durable or non-durable goods.

Luxury or Necessity:

In distinguishing whether the product is a luxury or a necessity, we come to the age old question - what is a luxury and what is a necessity? I may consider liquor and tobacco a necessity, and you may consider them luxuries. If there can be a clear cut distinction drawn, however, it is generally consider-

ed that investment is safer when the product is a necessity.

Consumer or Producer Goods:

In regards to whether the product be a consumer's good or a producer's good, it is generally held that consumer goods fields are more stable than Companies in the producer goods field. When times get bad, the manufacturer doesn't buy more machine tools or replace his old tools as readily, but he tends to make them last longer.

Durable or Non Durable Goods:

Durable goods such as steel products, are made to last over time. The investor should realize that these durable goods industries have many more fluctuations than the non-durable goods. (The steel industry has been aptly named - "Either Prince or Pauper"). As above, in bad times, you make your lawn mower last another year or two rather than replace it with a new one at the time.

Raw Materials: Source and Control:

Another factor that may influence an analyst's judgement about an industry is the control of sources of raw materials. An example might serve to explain this clearly. Before the war, the steel industry was able to get most of its raw materials here in this country. However, the rubber industry,had to depend for its raw materials, on exports f rom abroad. When these sources were cut off, it left the rubber industry in a bad way. The steel industry on the other hand didn't have its raw materials source cut off and they were able to obtain all they wanted.

The point I believe is clear - the analyst must check the

source and control of raw materials, and must foresee if anything could endanger that source. In the case of the rubber industry, it was the war that shut off the source. In the case of the steel industry, we might cite the fact that the Mesabi Range, one of the biggest sources of ore, has threatened to become exhausted. The analyst must investigate other possibilities for raw materials source in forming his judgement.

Labor Problems:

Labor problems in an industry, assume a greater importance today than ever before. This is due to the great strength that labor unions have attained. We might cite the recent case of the United Mine Workers, who under the leadership of John L. Lewis, stopped work for two weeks in a supposed memoriam to miners that have been killed. This work stoppage was, however, to all intents and purposes, an effort to attack the accumulated stockpiles and put the miners in a better bargaining position when it comes time to draw up a new contract.

This is just an instance, but think of the strength that is wielded, that a whole industry could be practically lifeless for a period of two weeks, and not only is the mining industry effected, but also we might speak of the repercussions on the Railroad Industry or the Steel Industry.

Since VJ day, strikes have caused a loss of almost 20 million tons of ingot steel. This is more steel than was used in 1939 by the four leading steel consuming industries (construction, automobiles, railroads, and containers).

It can not be stressed too strongly that in this day of

damanaging strikes, labor problems in an industry assume a much more proportionate share of importance than ever before assumed.

Tariff Position:

Our last factor to examine in the industry, is the tariff position. Does the industry depend on protective tariffs for its success or existance, or does it compete openly with imported products? And if it does operate under a protective tariff, the analyst must investigate the possibility of the tariff being repealed.

Summary:

Having examined the security issue the analyst must now turn to the industry it represents. The analyst gives the industry a current appraisal with an eye to future possibilities by examining the following factors: a) stage of the industry, b) economic importance, c) patent position, d) research programs, e) type of product, f) raw material source and control, g) labor problems and h) tariff position.

Chapter III. - The Company

When an analyst has thoroughly investigated the industry and has selected it as one with future possibilities, he must now select the Company which appears to occupy the best position in the industry.

Background Factors:

Just as the industry had very definite background factors to be examined, so too does the Company. Some of these are very definitely in common with those of the industry and we shall just repeat them and pass along. The raw material source control should be analyzed from the point of view of the Company as well as the industry, as should the labor problems, patent position, tariff positions and individual research programs.

Specific Company problems which we shall now deal with as background material are:

1) Management
2) Geographical location
3) Market served
4) Dompetitive position in the industry
5) Degree of integration
6) Diversification
7) Inventory problems
8) Accounting policies
9) Financial policies

Management:

Industrial companies, unlike Rai lroad or Public Utility Companies, are not subject to any regulating body which prescribes very definite rules for it to adhere to. (Rules which govern the Railroad and Public Utility Companies concern the establishment of rates or the guarantee of a fair return,) As a consequence the responsibility of maximum profits under highly

competitive conditions, lies right on the shoulders of management.

Right away we realize the prime importance of the management factor when we see that good efficient management my turn an unsuccessful Company into a prosperous one or inefficient management may wreck a successful Company.

The following questions should be asked by the investor: Who are the directors? How long have they been directors? What other affiliates do they have? Who are the operating managers? What is their record? Do they have good relations with labor? Do they have the ability to control inventories and costs? Have they expanded sales volume during prosperity? Are they progressive in introducing innovations into the business or do they lag behind?

The answers to these questions will give the analyst some idea of the management factor in the Company. After he has obtained this picture of the management, he can check it against the earning power of the Company under this management becuase the ultimate profit or less measures the skill or efficiency of management.

An instance might be cited here. The story is told that back in the 1900's, the chairman of the board of a biscuit Company conceived the idea of putting biscuits ina small five cent package. (Heretofore biscuits were sold in barrels). The rest of the board laughed at the idea, but the chairman was adamant and got his way. They shopped around for a name and came up with what has since proven to be one of the most recognized

names in the business - "Uneeda Biscuit."

This is an outstanding example of progressive management - the courage to recognize and introduce an innovation. Others soon followed and adopted the packaging idea, but they didn't reap the huge profits that "Uneeda Biscuit" did.

Geographical Location:

The second factor for consideration is the geographical location of the Company. This factor has assumed new importance as a result of a decision of the Supreme Court on April 26, 1948. This decision was the famous basing point system as applied to the cement industry. If carried over to other industries, it has many implications. Let us cite the effect on the Companies in the steel industry as an example, if the basing point system is employed.

For many years steel was priced as though it were produced in Pittsburgh. Pittsburgh was the only basing point city, and all steel was priced "Pittsburgh plus freight." In 1924, a number of cities were designated, as basing points, so that the present purchaser figures his price on the quoted price for steel plus freight from the nearest basing point city, irrespective of where the steel was manufactured. By means of competition, all steel Companies have been forced to meet the lowest price offered in each basing point city.

This new decision, if applied to the steel industry, would require them to charge all consumers a price at the mill, plus the true cost of shipment. Needless to say that steel mills near consuming markets will be far better off than mills located

farther away. To the more favorably situated mill will come more orders and increased business, whereas the less favorably situated Company is apt to lose a lot of its orders.

Market Served:

It logically follows that we should analyze the market for the product after discussing this system of pricing. If the market served is local or national this decision alone might do a lot of harm to the Company's markets. If the market served is international, the analyst must then appraise the current situation abroad as well as at home, because there may be disturbing features abroad that could very well harm the Company's future position.

Competitive Position in the Industry:

The position of the Company in the industry is the 4th factor to be examined. Is the Company a leader, intermediate or small? Is it maintaining its position, gaining or losing? Relative positions in the industry can be established on the basis of a) net income, b) dollar sales and c) assets. The important thing to determine here is the trend, either rising or falling.

Degree of Integration:

The fifth factor to be considered is the degree of integration present in the Company. Integratio n refers to the manner in which the various branches or organizations are combined into one unified organization. The Company may be integrated vertically or horizontally. Vertical integration is a situation where a Company controls the production of a good from the raw

material to the finished form. Horizontal integration on the other hand is where a number of diversified units are brought together under one Company.

A Company such as U. S. Steel, which controls its product from the raw material to the finished stage, enjoys considerable advantage over Companies with little integration, who have to buy the principal raw material from one producer and sell its product in semi-finished form to another producer.

Examples of horizontal integration are General Sea Foods and Standard Brands. Horizontal combination gives the advantage of centralized management, advertising, selling and good-will.

Diversification:

Diversification in a Company is the next factor for the analyst to examine. An outstanding example of diversification might be International Harvester Company, noted for the manufacture of agricultural equipment, and less known as one of the leading manufacturers of trucks. Other examples of Companies that have diversification are General Motors, Du Pont and U.S. Steel. This factor of diversification is important in that the diversification is so arranged that it complies with seasonal or cyclical trends. Products that will sell in slack times will partly carry products which only sell in great quantity during good times.

Inventory Problems:

In this day of endless talk about recession or depression, the investory position of a Company assumes added importance. With the present high prices, people feel that high inventories

are dangerous, as they are at the present time. Some claim the buyers market has set in and Companies can not sell their products as readily as before when a sellers market was present, and some claim that inventories have gotten out of balance.

Already demand has caught up with supply in a number of industries, and they are once again in a competitive situation. A Company's profits in such an industry could be wiped out in a rapid price decline, such as this country experienced in 1920 and 1938.

It is therefore essential that the analyst examine the inventory situation in the Company very carefully, because in times of generally declining prices Companies with heavy stocks of goods on hand stand to lose heavily.

Accounting Policies:

If there was as much uniformity in accounting proceedure among industrial Companies as there is in the Public Utility and Railroad Industries, then the analyst's job would be much easier. It seems that each Company adopts a system of its own and thus complicates the analyst's work. Some examples of different policies are as follows:

One Company may charge certain expenditures as operating expenses, whereas another Company may capitalize these expenditure. General Electric is an outstanding example of the former procedure when handling their "Research" account.

Depreciation:

Another difference may come in the handling of the depreciation account. Some Companies use a straight-line deprecia-

tion policy, others use a reproduction cost policy - U. S. Steel has just introduced an accelerated depreciation plan which has been approved by the SEC and is up for approval before the Internal Revenue Bureau.

This plan consists of an extra 10 per cent depreciation charge that was set aside for reserves last year. U. S. Steel feels that this is a proper recording of the wear and exhaustion of its facilities in current dollars, as distinguished from the original dollars expended on its facilities. As expressed by Enders M. Voorhees recently before Congress, "The item, "Added to Cover Replacement Cost," on U. S. Steel's income statement is designed to restore realism in the measurement of depreciation cost in the light of the dollar debasement transpiring between the time facilities were originally purchased and current accounting periods.

What is involved is simple recognition of the fact that regardless of the number of dollars in the original transaction that which was actually exchanged for facilities was a given amount of buying power. It is the buying power rather than any particular number of dollars that is therefore to be distributed as depreciation cost over the accounting periods in proportion to the physical wear and waning economic usefulness of the facilities. In accounting terminology, it is equivalent purchasing power that is to be "recovered in depreciation," rather than an equivalent number of dollars. The two will be the same if the buying power of the dollar remains constant; but otherwise the number of dollars in any accounting period, representing the

buying power of each dollar has declined, and less if it has arisen in the interval. [1]

Inventory Accounts:

Another example of differences is in the manner of handling inventories. There are two methods - Last in First Out (Lifo) and First in First Out (Fifo). In the meat packing industry most of the Companies now use the Lifo method where formerly they used the Fifo method. This new method tends to inject a degree of stability into the earnings of a Company, because in times of rising prices it tends to reduce indicated earnings, and in times of declining prices it tends to boost reported profits.

Financial Policies of Corporations:

Our last consideration as background material for our analysis are the financial policies of the Company. This is a field all by itself (so much so that Arthur Stone Dewing has written two volumes on the subject) and like the other "field" that I have touched on, I shall treat this briefly, posing questions and citing examples of financial policies.

Some of the questions posed by the analyst in regard to the financial policies of the Company are these - Does the Company have a policy of stabilization of earnings? American Telephone and Telegraph is an outstanding example of this. They do this by shifting around their depreciation and maintenance accounts. Does the Company constantly understate earnings? General Electric can be cited as an example of this. They constantly charged excessive depreciation and split up their

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[1] Statement by Enders M. Voorhees before the Subcommittee on Profits of the Joint Congressional Committee on the Economic Report, Washington, D. C., December 21, 1948

stock quite often (doesn't make earnings per share look too large).

In the early days of U. S. Steel when preferred stock was exchanged for preferred stock of the old Companies and common stock, which was completely watered, was given as a bonus, the Company over depreciated in order to cover up earnings - in reality there were secret reserves to the tune of a couple of hundred million dollars which served to take the water out of the stock.

The Company might employ the policy of overstating earnings, either to facilitate mergers or to give investors a false sense of prosperity. This was prevalent in the Railroad industry, through the neglect of maintenance.

Other questions to be asked are - what is the dividend policy of the Company? The working capital policy of the Company? The policy towards reducing funded debt, and simplifying their capital structure. The policy of expansion? The merger or consolidation policy? These are just a few of the corporate financial policies employed by Companies. The job of the analyst is made easier by answering these questions and having some idea of the type of policy employed by the Company he is analyzing. Then, when he examines the financial statement, he can either confirm his judgement of the policy, or he can contradict it.

Company Reports:

All industrial Companies of any size issue a report of some sort annually that gives an account to the stockholder of the

financial position of the Company. Annual reports have improved immensely since the first really modern type of report was issued in 1902 by the United States Steel Corporation. They now generally consist of a president's report to the stockholders, a balance sheet, income statement, and a statement of surplus. The balance sheet reports the financial position of the Company as of a given date. (Assets, liabilities and capital). The income statement reveals the income and the expenses of the Company during the given period of the report, and portrays either a net profit or a loss. The surplus statement consists of either earned surplus or capital surplus. If earned surplus, it has arisen out of earnings that the management has retained and accumulated. If capital surplus, it can be attributedto a number of sources, the most important of which are: 1) paid in surplus, 2) appraising assets at a higher value, 3) purchase of assets at less than book value.

These statements are followed by a certification of public accountant firm which claims that an audit (not of all transactions) has been made, and that the financial statement fairly represents the financial position of the Company, and that the statements are in conformity with generally accepted accounting policies.

Over recent years the reports have been getting more and more glamorized so to speak. They seem to represent a great triumph for the graphic arts industry.

There are pictures of officers, directors, plant and products together with various colored graphs depicting growth,

breakdown of expenses, and profits as a percentage of sales dollar. All of these tend to fill out and enlarge these annual reports.

This tendency towards the spectacular is all fine and good, but I feel that it tends to minimize the importance of the two or three pages devoted to the financial statements of the Company. The untrained investor is apt to be carried away by the surroundings of the book, and without an analysis of the financial pages (except for the earnings per share figure) he is apt to form a completely distorted picture of the Company. This might very well be a cause for an investor losing his money, when if he had bothered to analyze thoroughly, he perhaps could have averted his loss.

Summary:

The investor should include in his analysis of the Company the following factors: a) management; b) geographical location etc.(cf Page 16). After the completion of this phase of analysis the investor is then ready to proceed with the financial analysis of the Company.

Chapter IV - The Balance Sheet

Introduction:

Before examining the financial statements, I believe it wise to distinguish between the approach of the analyst and the approach of the accountant in examining the corporate reports.

The accountant in his examination is interested in the accuracy (from a technical standpoint) and the thoroughness of the report. On the other hand the analyst is interested in establishing trends and getting information from the statement that will enable him to form a judgement of a particular security. This judgement is formed on the basis of the analyst's probing and uncovering strong points or weak points in the Company's financial structure.

Balance Sheet Defined:

The Balance Sheet is a statement of assets, liabilities and net worth of a Company as of a given date. It is essentially a statement of opinion, for although assets may be correctly listed, the value assigned to such assets (except cash) is a matter of judgement.

According to an outstanding student of analysis work - "the significance of the balance sheet to the analyst is that it gives him a basis of determining; a) the amount of capital invested in the business, b) the working capital position of the Company, c) the capital structure and the assets that provide income, d) the adequacy of reported earnings.[1]

Additional information is needed,however, when an analyst in his examination of the balance sheet discovers an increase

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[1] Investment Analysis - John H. Prime - Prentice Hall p263

UNITED STATES STEEL CORP.

Consolidated Balance Sheets, as of Dec. 31:

	1948	1947
Assets:		
Cash	$225,351,809	$223,960,071
U.S. Govt. Secur.	213,842,725	303,011,034
Receivables net	195,991,522	148,785,736
(4) Inventories, net	339,175,195	289,236,644
Total Current	$974,361,251	$964,993,485
Real Estate	71,291,738	73,376,967
Plant, etc.	2,176,254,676	1992,912,451
Transportation	393,665,238	361,834,438
Emerg. facil.	292,104,696	296,847,218
Total	2,933,316,348	2,724,971,074
Deprec. & amort.	1,632,499,586	1,784,484,732
Net property	1,300,816,762	940,486,343
Intang. assets	1	1
(1)U.S. Govt. sec.	176,000,000	181,000,000
Misc. Invest, net	21,410,571	21,534,322
Supplies, etc.	41,944,280	39,604,436
Deferred charges	20,438,971	14,994,321
Total	$2,534,971,836	$2,162,612,907
Liabilities		
Accts. payable	$265,676,834	$212,205,853
Accrued taxes	207,479,992	181,231,868
Bond, etc. due	5,811,751	5,723,681
Divs. payable	25,887,237	17,183,985
Total Current	$504,855,814	$416,345,387
Long term debt	71,554,196	77,229,313
Prop. replace, res.	(5)	26,300,000
War cost reserve	20,562,262	25,420,807
Contingency res.	37,568,264	35,527,539
Accident, etc. res.	9,589,254	9,589,254
Loss replace, res.	---	2,199,435
Ohter reserve	7,782,053	8,240,993
Insur. reserve	50,000,000	50,000,000
7% pfd.stk.($100)	360,281,100	360,281,100
(3) Common stock	870,325,200	652,743,900
Capital surplus	(6)	(2) 38,351,643
Earned surplus	602,453,693	459,383,536
Total	$2,534,971,836	$2,162,612,907

(1) Set aside for property additions and replacements and for expenditures arising out of war.
(2) After deducting $111,158 cost of treasury stock.
(3) 8,703,252 no par shares
(4) Certain inventories carried at lower of cost or market: others at cost(last-in, first out method)see tabulation below.
(5) Deducted from property account above.
(6) After duducting $38,462,801(before deducting $111,158 cost of treasury stock)transferred to common stock.

or decrease in an item, to evaluate a reason for or the policy behind such an increase or decrease.

Breakdown of a Balance Sheet:

The assets side is generally divided into four groups: 1) current assets, 2) fixed assets, 3) miscellaneous assets, and 4) intangible assets.

The liability side is generally classified into three groups: 1) current liabilities, 2) deferred liabilities, and 3) net worth.

This is the fundamental breakdown of a balance sheet whether there be five items or fifty-five items. The items under these general captions may differ as to order or arrangement,but that depends on the indivdual accountant, or management of the Company.

Current Assets:

Current assets are those assets that are generally realizable within one year. Some of the chief items included in this group are cash, marketable securities, U. S. Government Securities, accounts and notesreceivable, and inventories of merchandise or raw materials.

Cash is either cash on hand, demand or time deposits. Marketable securities are, as the name implies, those securities which are readily saleable, and that may be liquidated on short notice when cash is needed. U. S. Government Securities speak for themselves - war bonds, bonds of government agencies such as the Reconstruction Finance Corporation, etc. Notes and accounts receivable are those items that represent amounts due from cus-

tomers within one year period. Notes receivable due from officers or affiliates must be stated separately. Inventories of merchandise or raw materials is the value attached to such items, unsold or on hand.

As reported by U. S. Steel as of December 31, 1948, the current assets were:

	1948	1947
Cash	$225,351,809	$223,960,071
Receivable net	195,991,522	148,785,736
U. S. Govt. Secur.	213,842,725	303,011,034
Inventories, net	339,175,195	289,236,611
Total current	$974,361,251	$964,993,485

Fixed Assets:

Fixed assets are those assets that are of a fairly permanent nature, and not readily liquidated into cash. In the general operation of a Company these are not liquidated readily, but in an orderly manner through depreciation. The method of carrying these assets varies - some carry them at book value, others at appraisal value, and still others at replacement value. Generally the fixed assets include, land, buildings and equipment. Land and buildings are self explanatory, but equipment herein considered is of a durable nature, such as fixtures, trucks and automobiles, as well as machinery and tools.

As reported by U. S. Steel Corporation, the fixed assets were:

	1948	1947
Real Estate	$71,291,738	$73,376,967
Plant, etc.	2,176,254,676	1,992,912,451
Transportation	393,665,238	361,834,438
Emerg. facil	292,104,696	296,847,218
Total	2,922,316,348	2,724,971,074
Deprec. & Amort.	1,632,499,586	1,784,484,732
Net Property.	1,300,816,762	940,486,343

Intangible Assets:

Intangible assets are those assets which a Company has, but are unavailable for the payment of debts. Items in this group are: goodwill, patents, copyrights, licenses, franchises, and trade-marks or brands. These intangibles are shown on the balance sheet usually at arbitrary values established by the management.

As reported by U. S. Steel Corporation, the intangible assets were:

	1948	1947
Intangible Assets	$1	$1

The investor must realize that the good will of U. S. Steel alone far exceeds this amount, but they choose to be very conservative in assigning this value to the intangible assets accounts.

Current Liabilities:

In general, the analyst considers a current liability as any short term obligation due and payable within one year. The current liabilities generally consist chiefly of notes payable, account payable and accruals.

Notes payable may cover notes payable to banks, for merchandise, for equipment, and notes payable to officers and others. It is good policy to separate these items because it thereby established the source of credit. Accounts payable are usually incurred in the purchase of merchandise and equipment. Accruals, which are relatively small, consist of amounts due, but not yet paid. Such items might be wages, interest, salaries or rents.

As reported by U. S. Steel Corporation the current liabilities were:

	1948	1947
Accts. payable	$265,676,834	$212,205,853
Bonds, etc, due	5,811,751	5,723,681
Accrued taxes	207,479,992	181,231,868
Divs. payable	25,887,237	17,183,985
Total current	$504,855,814	$416,345,387

Deferred Liabilities:

Deferred liabilities are those liabilities which are not due and payable within one year. Also included in the deferred liabilities are unearned income, valuation reserves, and reserves for contingencies, when a general reserve and not for a specific purpose.

Included in those liabilities not due in one year are such items as mortgages, debentures, and long-term notes payable.

Unearned income is income received and credited on the books, but which has not been earned as of the date of the issuance of the balance sheet. Valuation reserves include such reserves as depreciation, obsolescence and depletion.

As reported by U. S. Steel Corporation the deferred liabilities were:

	1948	1947
Long term debt.	$71,554,196	$77,229,313
Prop. replace. res.	---	26,300,000
War cost reserve	20,562,262	25,420,807
Contingency res.	37,568,264	35,527,539
Accident, etc. res.	9,589,254	9,589,254
loss replace, res.	----	2,199,435
Other reserve	7,782,053	9,240,993
Insur. reserve	50,000,000	50,000,000

Capital Account:

This account represents equities of the owners in the given Company. It consists of preferred stock, common stock, earned

surplus and capital surplus.

Preferred stock and common stock represent the value at which these classes of stock are carried at face value whereas no par value stocks (preferred or common) are carried usually at an arbitrary value.

Surplus represents the difference between assets and liabilities and is derived from two sources: a) capital, and b) earnings. Capital surplus arises from reappraisals of assets and premiums on capital stock. Earned surplus represents the amount carried to capital from earnings.

As reported by U. S. Steel Corporation the capital account was:

	1948	1947
7% pfd. Stk($100)	$360,281,100	$360,281,100
Common Stock	870,325,200	652,743,900
Earned surplus	602,453,693	459,383,536
Capital surplus	----	38,351,643

Balance Sheet Items Classified:

In conjunction with this classification of items in a balance sheet, Roy A. Foulke, Vice-President, Dun & Bradstreet, Inc. had compiled a guide which is generally considered conservative from the standpoint of bankers, creditmen, accountants, security underwriters, brokers and analysts. The classification shows not only the items that are current (current assets or liability) which items are noncurrent (fixed assets, miscellaneous assets and deferred liabilities), but also which items are intangible. (Refer pages 37, 38, 39 and 40.)

Significance of Balance Sheet Items:

Having examined the balance sheet, we now are confronted

with the question - what is the significance of the accounts that we have analyzed? The problem seems even more complex when we realize that a number of items are estimates while others such as intangibles are arbitrary.

Working Capital:

We can with confidence compute net working capital, however, as our first step in interpreting strength or weakness in the financial structure. This is done by substracting total current liabilities from total current assets. Whether the resultant figure is sufficient or not is a hard question to answer. First of all, it depends, of course, on the type of Company - how much it should be, and after that it depends on the judgement of the analysts, who very considerably among themselves. Most analysts say net working capital is sufficient if it just equals current liabilities. The writer feels, however, that working capital should be at least 1½ times current liabilities to be considered sufficient. This enables the Company to meet its obligations easily, and yet have some working capital to increase volume, if the occasion demands. We must realize that from the point of view of the investor, a strong working capital position is a conducive point to the investing of capital in the Company.

From our data as represented in the balance sheet of the U. S. Steel Company, we find the following working capital position:

Guide to Classification of Balance Sheet Items[1]

Assets	Curr.	NonC.	Intan.
Accounts Receivable			
Customers(Less Reserves)	X		
From Affiliate if concern is in healthy shape and accounts are being paid on regular terms	X		
From Directors		X	
From Employees		X	
From Officers		X	
From Partners		X	
From Subsidiary,if concern is in healthy shape, and receivables are being paid on regular terms	X		
From Subsidiary,if concern is in unhealthy shape,or accounts are not being paid on regular terms		X	
Miscellaneous		X	
Other		X	
Advances			
For Merchandise	X		
For Traveling		X	
To Affiliate		X	
To Employees		X	
To Subsidiary		X	X
Advertising		X	
Automobiles			
Bills Receivable(Same as Accounts Receivable)			
Bond Discount			X
Bonds		X	
Boodplates			
At Cost			X
Metal Value		X	
Brands, Trade			X
Building & Loan Shares	X		
Buildings		X	
Cash			
In Bank	X		
In Closed Bank		X	
In Sinking Fund		X	
On Hand	X		
Restricted		X	

Liabilities	Curr.	NonC.	Intan.
Accounts Payable			
For Merchandise	X		
For Services	X		
To Directors	X		
To Employees	X		
To Officers	X		
To Partners	X		
To Related Concerns	X		
Sundry	X		
Accruals			
Commission	X		
Interest	X		
Other Expenses	X		
Pay Rolls	X		
Rent	X		
Salaries	X		
Taxes	X		
Wages	X		
Advances from Customers	X		
Bills Payable (Same as notes Payable)			
Bonds			
Amt. Maturing within one year.	X		
Amt. Maturing after one year.		X	
No definite maturity date	X		
Capital(If Partnership or Proprietorship)			X
Capital Stock			
A,B, or C			
Common stock			X
Minority Int.		X	
Preferred or Preference stock			X
Capital Surplus			X
Chattel Mortgage	X		
Common Stock			X
Conditional Bill of sale	X		
Contingencies,Res.			

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[1] Practical Financial Statement Analysis - Roy A. Foulke - McGraw Hill Book Company, New York 1945 - Pages 113-116.

Guide to Classification of Balance Sheet Items - Continued

Assets	Curr	NonC	Int
Cash Value of Life Insurance		X	
Catalogues			X
Claims for Refunds under Carry-back Provisions of Tax Law		X	
Coal Lands		X	
Copyrights			X
Contracts			X
Debenture Discount			X
Deferred Charges(See also Prepaid Items)		X	
Deficit(Profit and Loss)			X
Delivery Equipment		X	
Deposits			
With Factor	X		
With Mutual Ins. Co.		X	
With Workmen's Compensation		X	
Designs			X
Development Expense			X
Dies			X
Docks		X	
Drawings			X
Emergency Plant Facilities		X	
Equipment		X	
Experimental Expense			X
Exploration Expense			X
Federal Gov. Securities see Gov. Securities)			
Financing Expense			X
Fixed Assets		X	
Fixtures		X	
Foreign Assets-Restricted.		X	
Formulas			X
Franchises			X
Furniture		X	
Good Will			X
Gov.Securities(see U.S. Gov. Securities)			
Improvements		X	
Insurance Premium, Prepaid Interest, Accrued		X	
Inventory(see also Merchandise)	X		
Investments		X	

Liabilities	Curr.	NonC.	Inta.
Debentures			
Amount Maturing within one year	X		
Amount Maturing after one year		X	
Deferred Credits or Income		X	
Deferr ed Income		X	
Deposits			
From Customers	X		
From Employees	X		
From Officers	X		
From Salesmen	X		
Dividends Payable	X		
Donated Surplus			X
Due Factor	X		
Earned Surplus			X
Employees' Deposit	X		
Excess-profits tax	X		
Federal Income and Excess Profits tax	X		
Funded Debt			
Amount Maturing within one year	X		
Amount Maturing after one year		X	
Income Taxes	X		
Loan from Factor	X		
Loans Payable (Same as notes payable)			
Minority Interest			
Mortgages		X	
Amount Maturing within one year	X		
Amount Maturing after one year		X	
No definite maturity date	X		
Net Worth(If partnership or ProprietorshipO			X
For Merchandise	X		
To Banks	X		

Guide to Classification of Balance Sheet Items.-Continued

Assets	Curr.	NonC.	Intan
Investments in and Advances to Subsidiaries and Affiliates		X	
Land		X	
Lasts			X
Leasehold Improvements		X	
Leaseholds			X
Licenses			X
Listed Securities	X		
Loan to Affiliate		X	
Loan to Subsidiary		X	
Machinery		X	
Magazine Titles			X
Mailing Lists			X
Marketable Securities	X		
Merchandise			
Advances on Merchandise	X		
Finished Goods	X		
Intransit	X		
On Consignment	X		
Raw Materials	X		
Supplies		X	
Work in process	X		
Mineral Land		X	
Mines		X	
Miscellaneous Receivable		X	
Models			X
Mortgages Receivable		X	
Municipal Bonds	X		
Municipal Bonds in Default		X	
Notes Receivable(Same as Accounts Receivable)			
Organization Expense			X
Packaging and Shipping Item		X	
Patents			X
Patterns			X
Pension Funds		X	
Plant		X	
Prepaid Items			
Insurance		X	
Rent		X	
Royalties		X	
Supplies		X	
Taxes		X	
Precesses			X
Profit and Loss(Deficit)			X
Property		X	
Quarries		X	

Liabilities	Curr.	NonC.	Intan
To Individuals	X		
To Others	X		
To Partners	X		
To Stockholders	X		
Term Loans(same as Bonds			
Officers'Deposits	X		
Paid in Surplus			X
Preferred or preference stock			X
Renegotiation Reserve	X		
Rent, Unpaid	X		
Reserves			
Bad Debts (Deduct from accounts rec.)			
Contingencies			
Depletion(Deduct from related assets)			
Depreciation(Deduct from related assets)			
Discounts(Deduct from Accts Rec.			
Inventory Adjustments(Deduct from related assets)			
Obsolescence(Deduct from related Assets)			
Renegotiation	X		
Retirement capital stock	X		
Self-insurance		X	
Taxes	X		
Unexpired subscriptions		X	
Unrealized Profit		X	
Salaries	X		
Salesmen's Deposits	X		
Sales Lien	X		
Social Security Taxes	X		

Guide to Classification of Balance Sheet Items.-Continued

Assets	Curr.	NonC.	Intan.
Real Estate		X	
Research Expense			X
Revenue Stamps	X		
Rights, Publishing			X
Royalty, Prepaid		X	
Securities		X	
Ships		X	
Sinking Fund		X	
State Bonds	X		
Stocks and Bonds		X	
Subscription Lists			X
Surplus(Deficit)			X
Timber(Standing or Uncut)		X	
Tools		X	
Tracings			X
Trade Acceptances	X		
Trade Brand			X
Trade-Marks			X
Trade Name			X
Treasury Bonds		X	
Treasury Stock			X
Trucks		X	
Unamortized Mortgage or Bond Expense			X
United States Government Securities	X		
Agencies of the Federal Government Issued as a Postwar Credit	X		
Unlisted Securities		X	
Vessels		X	

Liabilities	Curr.	NonC.	Intan.	
Paid-In				X
Profit and Loss-				X
If Red				X
Surplus				X
Surplus from Appreciation				X
Undivided Profits				X
Taxes Unpaid	X			
Terms Loans(Same as Bonds)				
Trade Acceptances Payable	X			
Unearned Income		X		
Wages, Unpaid	X			

	1948	1947
Total Current Assets	$974,361,251	$964,993,485
Total Current Liabilities	504,855,814	416,345,387
Net Working Capital	$469,505,437	$548,848,098

Here we can see that in 1948 the working capital is less than total current liabilities by a small amount, whereas it superceded total current liabilities in 1947. This position is not alarming, as it is, but if we had enough figures and could establish a definite downward trend, it would be a factor to consider.

Ratio of Net Working Capital to Total Investment:

The percentage of net working capital to total investment is important because it indicates the extent to which the corporation's investment is tied up in liquid as compared to fixed assets. It also gives us some idea as to the ability of the corporation to continue dividends in bad times.

From our data, we can determine that the ratio for U. S. Steel for the year ended December 31, 1948 was about 20 per cent. This means that for every dollar of investment, 20 cents represented net quick assets and 80 cents represented fixed assets.

Analysts generally agree that a ratio of 20 per cent is satisfactory although there is no hard and fast rule to guide the student.

Current Ratio Test:

There is another test to determine the ability of a Company to meet its current obligations, and this is the current

ratio test. It is test usually used by creditors, who want to know if a Company will be able to meet their short term debt, and is computed by dividing current liabilities into current assets. It is helpful to the investor also in the interpretation of the financial position of the Company. We can see circumspection that this ratio is a little less than 2 to 1 in 1948, for U. S. Steel.

This figure means nothing by itself, but when compared to the average current ratio of the Steel Industry for 1948, it takes on significance. Average Current Ratios are published by many credit agencies and trade associations. The writer cautions the reader that because a ratio in one industry is small and a ratio in another industry is large, it doesn't follow that the larger current ratio is indicative of a better financial position. Average current ratios vary from industry to industry depending on the amount of current assets tied up in inventory and the collectibility of accounts receivable.

Book Value:

From the balance sheet, we can calculate the book value (value at which something is carried on the books of the Company) of the securities. We will calculate these from our balance sheet in the order of preference - bonds, preferred and common stock.

Bonds: Total book value of the bonds is computed by adding the value of the bonds, preferred stock, common stock, reserve and surplus. We find from our statement of U. S. Steel, that in 1948, there was a total bond book value of $2,030,116,022.

Preferred Stock: To compute the book value of the preferred stock, we eliminate the face value of the bonds, and then proceed in the same manner as above. So in 1948, we see there was a net book value of $1,958,561,826 for the preferred stock, or about $543 coverage for each $100 share.

Common Stock: To compute the book value of the common stock, we must eliminate the face value of the bonds and preferred stock, and proceed as above. In 1948, we see a net book value of $1,598,280,726 for the common stock or about $182 coverage for each share.

The book value is at best a flexible reality based as it is on estimates and arbitrarily selected values. It assumes that in case of liquidation a security holder would receive the book value which his particular security has. However, the investor should realize that when a Company is forced to liquidate, it would probably realize much less for its assets then the amount represented on its books.

An example of this can be seen from the fact that creditors from the liquidation of Companies have received an average of six cents on the dollar.

Capital Structure:

The next step is to determine the proportion of bonds, preferred and common stock in the capital structure of the Company. The percentage of funded debt is computed by dividing the par value of the bonds, by the total value of the bonds, preferred stock, common stock, reserve and surplus. From our data, we

can ascertain that funded debt represnets approximately 3.5% of the capitalization of U. S. Steel. $\left(\frac{71,354,196}{2,030,116,022}\right)$

The ratio of preferred stock is found in the same manner, by dividing the stated value of the preferred stock by the total net book value of the preferred stock, Thus, we find that the percentage of the capital structure occupied by the preferred stock is approximately 18%. $\left(\frac{360,281,100}{1,958,561,826}\right)$

By simple mathematics, we can deduce that the common stock is 78.5% of the capital structure. (100-18+3.5).

This is a good example of the analysts' general rule in regards to the percentage of capital structure that should be apportioned to funded debt. The general rule is that the total bonds should not exceed 25% of all securities outstanding.

I mention this as a more or less rule of thumb for prospective investors. Speculators sometimes go out of their way and buy securities of a Company that has a high proportionate debt or preferred stock, because of what is termed "the leverage factor". This means that a small increase of earnings of say 10% might result in an increase of 50 or 100%, for common stock dividends.

This concept of the leverage factor might be made more clear by means of a simple illustration. Let us use as our example Company X which has $10,000,000 of 4% bonds outstanding. Let us further suppose that the Company is earning $440,000 befor bond interest. This means that there will be only $40,000 left for the common stock. Let us now consider an increase of 10% in earnings. We now have earnings of $484,000 before bond

interest which will leave $84,000 for common stock dividends, or in other words an increase of more than 100%.

I reiterate at this point and say that this is a device for speculators only, and investors should stay away from a situation such as this. The reason for this being that a 10% decline in the earnings of the Company in this situation would wipe out everything available for the common stockholder and besides would even make the Company unable to meet its fixed charges. This is the fundamental weakness of Companies with an unbalanced capital structure (a disproportionate amount of debt or preferred stock).

Chapter V - The Income Statement

Introduction:

Once having determined the financial soundness of the Company from the balance sheet, the analyst must now turn to the income statement to determine how the Company is actually doing at present, and to use the statement as a guide to the future.

The income statement, and the balance sheet differ in that the balance sheet shows the condition of the Company as of the date issued, and the income statement shows the nature or the records of its operations that result in the particular conditions of the Company, as shown on the balance sheet. We might say that the income account is the reason for the change of the balance sheet from the end of one fiscal period to the next. In contrast with the balance sheet, we might pause to mention that there is much more uniformity in the balance sheets of industrial Companies than in the income statements. Income statements vary from reports which state only gross profits or net earnings with no explanation or breakdown of this item, to reports that give a very detailed explanation of the breakdowns of individual items. The majority of industrial Companies today use a combined income and surplus account, so we shall discuss that type in this chapter.

I have chosen the Consolidated Income Account of U. S. Steel Corporation, because it strikes a little better than a happy medium and is typical of the majority of industrial Companies under the Scrutiny of the Security and Exchange Commission.

UNITED STATES STEEL CORP.

Consolidated Income Account, years ended Dec. 31:

	1948	1947
Prod. & Serv. sold	$2,481,508,535	$2,122,786,243
Wages & Salaries	1,005,829,124	872,496,549
Social secur. tax	19,692,732	20,663,936
Pension paymts.	10,191,848	10,402,279
Purch.prod, etc.	1,013,756,603	841,915,356
(2)Deprec.,etc.	145,986,681	114,045,483
General taxes	49,887,902	45,197,381
Net Earnings	236,163,645	218,065,259
Interest, etc.	2,394,345	2,507,729
(1)War Costs adj.	cr4,858,545	cr2,540,618
Fed.income tax	109,000,000	91,000,000
net income	129,627,845	127,098,148
Preferred divs.	25,219,677	25,219,677
Common divs.	52,188,656	45,692,073
Earned surp.,1-1	459,383,536	56,186,398
Depreciation res.	cr270,000,000	403,197,138
Tfr.to com.stk.	179,118,499	----
Earn.surp., 12-31	602,453,693	----
Times chgs.earn		
Before inc.tax	100.66	87.97
After inc.tax	55.14	51.68
Times chg.&pfd. divs. earned	4.78	4.67
Times pfd.divs.	5.14	5.04
Earn.,pfd,share	$35.98	$35.28
No. of pfd. shares	3,602,811	3,602,811

(1) War costs included above applicable to and provided for in prior years less associated Federal income tax adjustments.
(2) Includes accelerated depreciation: 1948, $55,335,444 (including a deficiency of $2,675,094 in the amount of $26,300,000 reported in 1947); 1947, $26,300,000.

Income Account Defined:

The income account reports the net earnings or loss for the period, their derivation and distribution. The derivation of net income lies in the operating and non operating sections of the statement. The distribution covers the amounts paid to creditors in interest and to owners in dividends.

Breakdown of Income Statement:

We can roughly break the average profit and loss statement into three broad categories: 1) operating section, 2) income section, and 3) surplus section.

The operating section is made up of the following items:

1. Net Sales
2. Cost of Sales Expenses and other Operating Charges
3. Net Operating Profit

The income section comprises these items:

1. Net earnings(Net operating profit)
2. Other Income - dividends
3. Interest charges
4. Provision for Federal Income Tax
5. Net Income

The surplus section consists of:

1. Dividends - preferred, common
2. Reserves for contingencies
3. Earned surplus
4. Surplus at beginning of period
5. Surplus at end of period

Operating Section:

Net sales represents the amount of money paid to the Company for products and service during the given period. It is usually represented as a net figure, which means that the gross sales figure has been adjusted for returned goods and

discounts. This item should exclude billings between subsidiaries and affiliates.

The next item is usually that of expenses incurred in the line of business. Under these operating expenses come selling, administration and general, depreciation and taxes, (other than federal) pensions, etc.

Cost of goods sold is a total figure that represents all the expenses that go right into the manufacture of the products. On some income statements this figure is broken down into such expenses as wages, raw materials, freight, rent, etc. Selling, administrative and general expenses are almost self explanatory-salaries of executives, commissions for salesmen, advertising expenses, and the like - all costs that are incurred in the selling and handling of the products sold. This is strictly a non-manufacturing cost as opposed to "cost of goods sold" which is a manufacturing cost in its entirety. This is also a figure that has no uniformity, as between Companies.

Depreciation represents the amount that management transfers from present income to its reserve account ot help write off the expense of an asset. Pension plans have come into vogue more and more with the new found strength of unions giving them a better bargaining position in seeking these plans. The Company pays out so much money out of present income towards a fund, which enables a worker to receive an income for life, when he is retired. Taxes comprise payments for social security, excise taxes, state taxes and the like. Federal income tax is not included here because it is not a direct cost

of doing business.

Operating Profit:

All these expenses are added up and thetotal is subtracted from the net sales figure to obtain the net operating profit. This figure tells us what profit the Company made in manufacturing and selling its product. This figure is interesting in that it shows how successful the Company is in its main function. A high figure here doesn't mean, of course, that the stockholder, especially the common, is going to get dividends because there are other items to be deducted before dividends are paid. We can get some idea of efficiency from this figure, however, on comparing it with figures in past years.

As can be seen from our example, U. S. Steel's operating figures are:

Prod. & serv. sold	$2,481,508,535	$2,122,786,243
Wages & Salaries	1,005,829,124	872,496,549
Social Secur. tax	19,696,732	20,663,936
Pension paymts.	10,191,848	10,402,279
Purch. prod. etc.	1,013,756,602	841,915,356
(2) Deprec.,etc.	145,986,681	114,045,483
General taxes	49,887,902	45,197,381
Net earnings	236,163,645	218,065,259

Income Section:

I have carried net operating profit over into the income section as a starting point. Added to this figure is income received from other sources, not directly connected with the major purpose of the business. This other income may be in the form of dividends from securities owned in other Companies; interest from Government Bonds; fees for services etc. This gives the total income received by the Company, (operating in-

come and all other income.) From the figure total income are subtracted items such as interest on funded debt and Federal income taxes. If a Company has bonds or long term debt outstanding, they are obliged to pay a certain amount of interest to the holders of their bonds. This must come out of total income.

After all normal business expenses have been taken care of, then Federal Income Tax is figured on the basis of total income that is left. Because Federal Income Tax is figured on total income, and not with the other taxes above as part of the operations of the business, it is said that the Government is a shareholder in the Company. Total income minus these deductions gives us the net income figure - the amount available to the stockholders for dividends. Here is where the dividend policy of the management comes into play, in deciding what portion of net income the stockholders are going to receive.

U. S. Steel presents its income section thus:

Net Earnings	236,163,645	218,065,259
Interest (on funded debt)	2,394,345	2,507,729
War Costs adjustment[1]	cr4,858,545	cr2,540,618
Fed. income tax	109,000,000	91,000,000
Net Income	129,627,845	127,098,148

[1] This is a credit to the income account because it was applicable to and provided for in prior years.

Surplus Section:

The next section is the surplus section and the first item we examine is dividends. Dividends are paid forst to the preferred stockholders, as they have a prior claim on earnings.

If there is anything left after the preferred stockholders have been paid, then that amount is paid to the common stockholders at the discretion of the directors. They decide what the common dividend is going to be and the remainder is retained in the Company as earned surplus. This earned surplus is added to the earned surplus at the beginning of the fiscal period. This figure after being adjusted, as in the case of our income account for U. S. Steel, becomes earned surplus as of December 31, 1948. The adjustments are an addition of the depreciation reserve item, as it is credited to surplus and a subtraction of the item "transfered to common stock" (cost of treasury stock).

Net Income	129,627,845	127,098,148
Preferred divs.	25,219,677	25,219,677
Common divs.	52,188,656	45,692,073
Earned surp.	459,383,536	56,186,398
Depreciation res.	cr270,000,000	403,197,138
Tfr. to com. stk.	179,118,499	--------
Earned surp., Dec. 31, 1948	602,453,693	--------

If a Company did not use a consolidated income and surplus account, then our figure (as shown in our example) "surplus for the year" would be the last item on the income statement, and the rest of the figures would be portrayed on a separate surplus statement which would be the third section of the Financial Report. In the case of our example, a separate surplus statement would be justified due to the transfer of the depreciation reserve figure to the surplus account.

Operating Ratio:

In a detailed analysis of the income account, we use certain ratios for comparison purposes. The first such ratio that we employ is termed the "operation ratio". This ratio is used to

measure the relative efficiency of management in operations on the basis of a steady, increasing or decreasing ratio. For example, all other things being equal, a falling ratio should reflect increased efficiency. I say "all other things being equal" because this ratio may reflect either prosperity or depression and therefore management might not be the complete cause. The ratio is computed by dividing the total of operating costs by net sales.

In case of U. S. Steel, the operating ratio - computed thus was:

$$\frac{\text{total costs}}{\text{net sales}} - \frac{2{,}245{,}344{,}890}{2{,}481{,}508{,}535} - 90.8\% \text{ operating ratio}$$

Importance of Items in Operating Expenses:

The importance of the items in the operating expenses varies with the industry under consideration. We can examine the labor factor in the following industries to show this.

Cost of labor as a percentage of total value of Industry dollar:

Railroad Industry:	47%
Telephone Industry:	43%
Rubber Industry:	47%
Burroughs Adding Machine Company:	67%
Tobacco Industry:	1.9%

Notice how the labor cost in the tobacco industry is such a small factor in the total cost as compared to Burroughs Adding Machine Company, which has a labor factor of 67% of total cost.

In the tobacco industry the major item besides raw material costs is advertising. The success of a Company in the cigarette or tobacco industry depends on the effectiveness of their ad-

vertising.

Selling, Gen. and Adm. Expenses/Net Sales:

Another ratio that is used by many analysts is that of selling general and administrative expenses/net sales. This tends to be a ratio, rising in bad times, and lower in good times, due to the fixed payroll in the form of salaries to top executives. This may be smoothed out by use of a bonus plan, or profit sharing plan. If there is any difficulty in this ratio, then information on management's pay can be discerned by examing proxy statements.

Other Income:

On an income account that lists "other income", it is the analysts' job to determine, 1) the source, and 2) how constant it is. The determination of whether this is an ever recurring item is an important one. If it is a recurring item the analyst should find out, by comparison over the years, what percentage of total income this non-operating income has been. If it has been a considerable amount, it might serve to act as a cushion to total income - should operating income fall off considerably.

Times Fixed Charges Earned:

Our next item for scrutiny is the amount of total income carried through to the fixed charges, I.E., the interest on funded debt. The expression "times fixed charges earned" has arisen from the ratio - total income available for fixed charges/fixed charges. In industrial circles it is common practice to compute this figure before Federal Income Tax has been taken out

and after. We see from the income account of U. S. Steel the following: Times fixed charges earned:

	1948	1947
Before income tax	100.66	87.97
After income tax	55.14	51.68

It is obvious that the creditor has a much stronger position the more times the fixed charges are earned, and it is felt by analysts that a times earned factor of at least five or better is required for a high rating. Here U. S. Steel has earned its fixed charges 55.14 times after federal income tax. A very comfortable position for the bondholder.

Federal Income Taxes:

Federal income taxes should be looked at from the point of view of what percentage they are to taxable income. If they are far off from the going rate (37%), they require an explanation. Close to 38% variation and up to 42% is not disturbing because of a consolidated basis and dividend income.

Net Income/Net Sales:

For comparison with other Companies, the ratio of net income to net sales is an important ratio to some analysts. Net income should also be computed before income tax and after income tax to see what percentage of total income the Company is able to bring down to tax. This will vary amonst Companies whether they be diversified or not, or integrated or non-integrated.

Preferred Stock Ratios:

When we examine the items in the surplus section, we come

first to preferred stock, which usually has a prior claim on earnings. We measure the strength of the preferred by two means: 1) earnings per share and 2) times preferred dividend earned. Earnings per share, which does not mean too much, is determined by the ratio-net income/number of shares of preferred stock outstanding. From our example, we see that U. S. Steel had the following figures:

$$\frac{\text{Net Income}}{\text{\# of shares of pfd. outstanding}} - \frac{129{,}627{,}845}{3{,}602{,}811} = 35.98 \text{ earnings per share}$$

Some analysts claim that the second ratio - # of times the preferred dividend is earned is a much better test, on an overall basis, since the first ratio does not indicate the amount of the dividend requirement. Supposing the dividend requirement of a Company was $6 and the Company earns $12, then dividend requirements have been earned twice. The surplus section of our example shows us that U. S. Steel earned its preferred dividend 5.14 times. This is a very healthy condition as it is generally felt that 2½ to 3 times the preferred dividend requirement earned establishes it as a high grade preferred stock.

Common Stock Ratios:

We now come to our last item in the analysis, namely, the common stock. After everything has been deducted from the total income, the balance is available for the distribution to common stockholders. This balance is usually figured on the basis of earnings per share of common stock. The ratio is expressed thus: net income - dividends on preferred stock/number of shares of common stock.

This resultant is not the amount paid to the common stockholder. The amount apid to the common stockholder depends on the discretion of the directors. The directors vote to retain so much as earned surplus, and so much to be distributed to the common stockholders. This earned surplus might allow the Company to pay dividends at a later date when earnings aren't so high. (e.g. 1945 in the example below).

As an example, we may cite this table from the report of U. S. Steel showing earnings per share, and the amount paid out to common stockholders:

Common stock record:	1948	1947	1946	1945	1944
Earnings per share	11.99	11.70	7.28	3.77	4.09
Dividends	5.00	5.00	4.00	4.00	4.00

The true earnings per common share figure depends on a lot of factors that we have mentioned above, e.g.-overdepreciation affects earnings per share - and as it cannot be calculated by the analyst until he makes a complete and thorough analysis of the factors. After this analysis, if he discovers the earnings per common share figure to be very favorable, he then investigates the price-earnings ratio. This is very simply the market price of the common stock/the earnings per share of common stock. This is a very important ratio because the market price reflects the judgement of buyers and sellers all over the world concerning the particular stock as to present and prospective earning power. In the case of U. S. Steel, common stock which is at present selling about 75 with an average earnings pershare of $7.77 over the last five years, we have a price-earnings ratio

of about 10 times, which is well under the generally considered 15 times earnings as a fair price. We could safely say on this basis that U. S. Steel common stock is definitely underpriced, as are many others on this present stock market.

Forecasting Future Earnings:

As was mentioned above, the investor is not only interested in the present position of the Company, but is very much concerned over the future potential earning power of the Company. To put it in other words, the investor is entrusting his capital in a Company today, to share in future earnings of that Company.

There are various ways of trying to foresee future earnings. One way is to collect your data, plot it and then project the trend. This is the least satisfactory method.

Another method is by correlating the growth of the product with population growth or perhaps see if it has a relation with consumer disposable income or national income.

Take for example, the cigarette industry. There is a definite growth factor in the industry as shown by the following figures:

Cigarette Consumption in U;S.:-

1926	1930	1935	1940	1945	1947
2.21 lbs.	2.73	3.02	3.92	6.62	6.91

This shows an increase in cigarette consumption from 2.21 lbs. in 1926 to 6.91 lbs. in 1947. If we were to project this trend, we would probably wind up with a figure of 7.+ for the year 1949.

We could by another method proceed to correlate the rate

of growth with the rate of growth of population, (we could find that cigarette industry growth is at a faster rate than population growth.)

The analyst might try and determine the source of growth and try and forecast if there is room for further growth. In his analysis, he would probably find out that growth in the cigarette industry could be attributed to the following sources: 1) more women smoking, 2) people smoking regularly at a younger age, 3) the development of certain areas in the mid-west, where due to religious beliefs, smoking was frowned upon. The analyst might also discover that per capita consumption of tobacco is much higher in England then in the United States which would leave more room for growth in the industry.

Certain assumptions should be made by the analyst before forecasting. He should try and forecast the selling price of the article. If there is apt to be any change, up or down, how will it effect the earning power of the Company. The item of taxes should be considered - will there be a raising or lowering of taxes. Take for example, the cigarette industry: how would a decrease in taxes affect sales of cigarettes? I believe that it would increase sales proportionate to the decrease in taxes.

These are just a few of the methods used by an analyst to forecast future earning power and growth possibilities. I feel that no one of these methods is satisfactory in itself, but I do believe that a combination will greatly aid the investor in trying to determine the future profitability of his investment.

Chapter VI - Summary and Conclusions

Conclusions to be drawn from such a report as I have endeavored to write must of their very nature be general conclusions. This is so because the topic has been discussed from an overall or general standpoint.

Conjunctive Analysis:

My first recommendation is that the prospective analyst use conjunctive analysis in his examination of a Company's security. By this I mean that he sould examine the balance sheet as well as the income statement.

It is true, as I have mentioned above that earnings(true earnings) are very important as a measure of the skill of management and as a record of growth of a given Company. However, as we have seen in our analysis above, that although the income account is the more important of the two, the balance sheet should not be neglected completely.

It is my opinion that with the interrelation of the items on the balance sheet and income account the analyst will get a more true picture of intrinsic values inherent in the Company. This gives him a twofold criterion on which to base his judgement, instead of relying on the single criterion.

An example of conjunctive analysis can be seen from a scrutiny of the inventory position of the firm.

There are two ratios to be used in examining the inventories account. The first is a ratio between inventories and total current assets. The percentage figure that is a resultant, is a very good figure for comparison purposes.

The second ratio is the one I wish to dicuss as an example of conjunctive analysis. This ratio is the rate of inventory turnover or the ratio of inventories to net sales. As one can realize an inventory is either large or it is small, depending on the type of Company and the rate of turnover. The rate of turnover is determined by dividing inventories(an item on the balance sheet)into net sales(an item on the income statement).

We can see from our data that U. S. Steel turned over its inventories about 7.3 times. $\frac{2,481,508,535}{339,175,195}$

So far we have examined the ratios of the particular Company for the purpose of ascertaining the financial position of the Company. There is no question as to the value of these ratios as such, but their value becomes more and more important when used for comparative analysis.

This is so because these ratios of themselves are merely relative. If a Company has an operating ratio of 85%, or a current ratio of 3 to 1, that is all well and good, but we don't know the real significance of these figures until we compare them with others in the industry or with the same Company over a period of years.

It is like saying, it is hot today. This is relative to some other day. It is hot today as compared to yesterday, or the same day last year. Therefore, my second recommendation is the need for comparative analysis.

Comparative analysis can take one of two forms. Either

you compare the ratios of Company X with those of Company Y in the same industry or compare the ratios of Company X with the composite ratios of the industry.

As mentioned above an operating ratio of 85% doesn't assume too much importance until it is noticed that the operating ratio of say, 30 selected Companies in a given industry is 91%.

Trend Analysis:

My third recommendation is for the need of the prospective investor of trend analysis.

A Company should never be analyzed for a one year period only. Conditions change every year, they are never the same. The year you pick to analyze might be a year of general prosperity, and thus the outlook for the Company would be very good in the mind of the one year analyst.

If the analyst is examining a Company for the year of 1948, he should trace his steps all the way back to the early 30's. He should set up some sort of a table to show him the trend over the years. Operating ratios, earnings records, stability of dividend policy, fixed charges coverage - all these can be tabled and compared to get some notion of how the Company fared in both good years and bad.

Value of Analysis:

I wish to conclude this thesis with an illustration showing the value of analysis.

In 1932, United Fruit Company showed earnings of close to

$2 per share. Without analysis this figure would look very good. Upon analysis, however, one could see that United Fruit Company wrote down its assets $51 million and in reality the earnings pershare figure should have been about 35¢.

An investor looking at these arnings figures would think the Company did very well for such a poor year, but after careful investigation the true picture was brought to light.

Comprehensive Abstract:

Today savings have reached an all time high, but far too little of these savings are going into the investment field. There has been a shift in the distribution of income of late, and as a result a vast portion after taxes has accumulated in the hands of the little people. This means that more people can have automobiles, washing machines, refrigerators and the like, which is all well and good, but these people are not investing their money in securities which is bad for the system of private enterprise.

Free and private enterprise in order to function must have capital. These industries, from whom the savings have been derived, face a bleak future without the availability of capital. And not only these industries, but new industries that spring up in the future whose very lifeblood is new or risk capital, must be considered.

It is only natural that these so called little people should seek security or safety first for their savings. As a result there has been a great increase in institutional savings-insurance companies and savings banks. These in turn have to seek safety first investments to protect their investor's savings, and so as a result there is less and less of so called risk capital.

Savings are the initial step in capital formation, without which the private enterprise system could not function. Heretofore most of the savings and investing have come from the rich

classes and although there are still a few of this type around they are very few because of high taxes that exist today. The workers in the middle income are getting higher and higher incomes, and are able to keep a good portion after taxes. The worker in this class must realize that in order to keep his high standard of living which he has today, he must save and invest so that private enterprise may live.

This then is the problem: there is a need for capital in industry - the old sources(the rich classes) of capital are slowly drying up - new sources must be found and tapped - these sources are those workers in the middle income class - electricians, carpenters, firemen, policemen, plumbers, etc. These workers must be educated in the responsible role that they must play in this great system of private enterprise. They must be taught that the investing of capital requires risk on their part, and a commensurate return proportional to that risk.

This is the job of the men in the investment field to convince these men of their responsibility in their Country. My work does not begin until these men have been convinced of their responsibility and are ready to invest, then I hope this paper will be useful in helping them to invest.

To these men,the working men, the plumbers, the boilermakers, the butchers, the storekeepers, etc - to all of these prospective investors, I have dedicated this report as an aid in the selecting of securities.

The prospective investor when seeking a sound security

must examine everything that is connected with this security. First of all, he must examine the type of security, then the industry which this security represents, and finally the Company that issues the security.

The first stage of analysis - the security itself - involves the following steps: 1) the type of security - bond, preferred stock or common stock, 2) the reason for the issue of the security - funding, refunding, refinancing, new capital, working capital or for purposes of expansion, 3) the last step is to determine the preferability of the security from the investor's own viewpoint.

The second stage of analysis is the examination of the industry which the security represents. In this examination the following factors must be analyzed before a judgement can be formed of the industry. The stage of the industry is the first factor - is the industry new, one which has passed the readjustment period, one which is in a period of vigorous growth, one that is mature or one which has reached the point of saturation?

The next step is to examine the future profitability of the industry because the investor is entrusting his capital with the prospect of sharing in future earnings. The future profitability conclusion is arrived after an examination of the many factors that could affect it. An examination should be made of: a) economic importance, b) patent position, c) type of product d) research, e) raw materials, and f) tariff position.

The third stage of analysis is to examine the background factors of the particular company within the industry, which the prospective investor wishes to entrust his capital in. Some of the factors to be examined in the analysis of the company have been mentioned above. Factors such as, raw materials control, labor problems, patent position, tariff position and individual research programs.

Specific company problems which are considered as background factors for examination are: 1) management, 2) geographical location, 3) market served, 4) cometitive position in the industry, 5) degree of integration, 6) diversification, 7) inventory problems, 8) accounting policies and 9) financial policies.

The fourth stage of analysis is the actual financial analysis of the company. This requires an examination of the balance sheet and the income statement of the company in question. Highlights of the examination of the balance sheet include the working capital position, the capitalization of the company, its inventory position, and its need for new capital.

Examination of the income statement reveals the earning power record or the skill of the management. Items to note carefully are sales, operating expenses, operating ratio, depreciation policy, coverage of fixed charges and earnings per share.

After these have been examined, we look at the market position of the security or the price earnings ratio,and the future potential earning power of the Company. As was mention-

ed above, and I am going to reiterate, this future potential of the company is very important since the investor is buying shares in a company with the expectation that he will participate in the earnings of the company in the future.

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As a supplement to these sources, I have used the services of Moody's and Standard and Poor's, and I have also drawn freely from the lectures of Dr. Douglas-Bellemore, Chairman of the Economic Department at Boston University: from the lectures of Clair Pontius, Security Analyst for R. L. Day and Company, Boston; from the lecturers of Kennard Woodworth, Security Analyst for Eaton & Howard, Inc., Boston; and also from the lectures of George Hansen, Security Analyst for Keystone Custodian Fund, Boston.

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